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Signature

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

in Re Application of:

Anthony C. CHAO et al.

Serial No.: 09/945,360

Group Art Unit: 1743

Filing Date: August 31, 2001

Examiner: Unassigned

Title: CELL-BASED MULTIPLEXING ADME ANALYSIS USING FOCUSED FLUID

**FLOW** 

## INFORMATION DISCLOSURE STATEMENT

Commissioner for Patents Washington, DC 20231

Sir:

This is an Information Disclosure Statement submitted for the Examiner's consideration. Applicants respectfully request that the Examiner review and make of record the references identified below.

PTO-1449 forms listing the references accompany this paper. Applicants would appreciate the Examiner's initialing and returning the forms to indicate that the references have been reviewed and made of record. The references are as follows:

	U.S. PATENT DOCUMENTS		
DATENT NO	ISSUE DATE	PATENTEE	
PATENT NO.	Filed 4/25/01	Beyer et al.	
Serial No. 60/286,819		Beyer et al.	
Serial No. 60/286,494	Filed 4/25/01	Beyer et al.	
Serial No. 60/286,550	Filed 4/25/01		
Serial No. 09/896,484	Filed 6/29/01	Bonde et al.	
Serial No. 09/941,944	Filed 8/28/01	Socks et al.	
	6/17/69	Giddings	
3,449,938	3/27/90	Guirguis et al.	

	U.S. PATENT DOCUMENTS	
PATENT NO.	ISSUE DATE	PATENTEE
5,202,227	4/13/93	Matsuda et al.
5,514,555	5/7/96	Springer et al.
5,536,662	7/16/96	Humphries et al.
5,593,814	1/14/97	Matsuda et al.
5,716,852	2/10/98	Yager et al.
5,728,576	3/17/98	Dudley et al.
5,739,001	4/14/98	Brown et al.
5,776.748	7/7/98	Singhvi et al.
5,948,684	9/7/99	Weigl et al.
5,972,710	10/26/99	Weigl et al.
5,976,826	11/2/99	Singhvi et al.
5,989,918	11/23/99	Dietz et al.
6,091,502	7/18/00	Weigl et al.
6,103,479	8/15/00	Taylor
6,120,666	9/12/00	Jacobson et al.
6,159,739	12/12/00	Weigl et al.
6,171,865	1/9/01	Wiegl et al.
6,174,690	1/16/01	Manger et al.
6,180,239	1/30/01	Whitesides et al
6,200,814	3/13/01	Malmqvist et al

	FOREIGN PATENT DOCUMENTS	
DOCUMENT NO.	PUBLICATION DATE	COUNTRY
WO 99/05512	2/4/99	PCT
WO 00/56444	9/28/00	PCT

## OTHER DOCUMENTS

Boyden (1962). "The Chemotactic Effect of Mixtures of Antibody and Antigen on Polymorphonuclear Leucocytes," *J. Exp. Med.* 115:453-466.

Eddershaw et al. (2000), "ADME/PK as Part of a Rational Approach to Drug Discovery," *Drug Discov. Today* 5(9):409-414.

Elkins et al. (2000), "Progress in Predicting Human ADME Parameters in Silico," *Journal of Pharmacological and Toxicological Methods* 44(1):251-272.

Ramos et al., "Quantitative Measurement of Cell – Cell Adhesion Under Flow Conditions," *Methods in Molecular Medicine* 18:507-519.

Takayama et al. (1999), "Patterning Cells and Their Environments Using Multiple Laminar Fluid Flows in Capillary Networks," *PNAS* 96(10):5545-5548.

Takayama et al. (2001), "Laminar Flows: Subcellular Positioning of Small Molecules," Nature 411:1016.

Tashiro et al. (2000), "Design and Simulation of Particles and Biomolecules Handling Micro Flow Cells with Three-Dimensional Sheath Flow," *Micro Total Analysis Systems* 2000, pp. 209-212.

Thompson (2000), "Early ADME in Support of Drug Discovery: The Role of Metabolic Stability Studies," *Curr. Drug. Metab.* 1(3):215-241 (abstract only).

Weigl et al. (1999), "Microfluidic Diffusion-Based Separation and Detection," Science 283(5400):346-347.

The first five references identified above and as listed on attached Forms PTO-1449 as Reference Nos. AA-AE are U.S. patent applications, and, as such, copies thereof are included pursuant to 37 CFR § 1.98(a)(2)(iii).

This Information Disclosure Statement is not intended as a representation that a search has been made, that additional information material to the examination of this application does not exist, or that any of the above references constitutes prior art to the present application within the meaning of 35 USC § 102.

As applicants have not yet received a first Action on the merits, no fee is required for filing this Information Disclosure Statement. If, however, the PTO finds that for some reason a

fee is found to be necessary, our Deposit Account No. 18-0580 may be charged therefor. A duplicate copy of this paper is enclosed.

Respectfully submitted,

12/9/01

By:

Dianne E. Reed

Registration No. 31,292

REED & ASSOCIATES 800 Menlo Avenue, Suite 210 Menlo Park, California 94025 (650) 330-0900 Telephone (650) 330-0980 Facsimile

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Date

SUBSTITUTE LORALPTO-1449	U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE	ATTY. DOCKET NO.: 2100-0006	SERIAL NO.: 09/945,360	
INFORMATION DISCLOSURE  FEB 0 6 2002 STATEMENT BY APPLICANT		APPLICANT: Anthony C. CHAO et al.		
ise several she	eets if necessary)	FILING DATE: August 31, 2001	GROUP: 1743	
(37 CFR PANDEMARK)		<u>. L</u>		

EXAMINER	CITE	PATENT	ISSUE DATE	PATENTEE	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
INITIALS	NO.	NUMBER					4/25/01
	AA	Ser. No. 60/286,819		Beyer et al.			4/25/01
	AB	Ser. No. 60/286,494		Beyer et al.			4/25/01
	AC	Ser. No. 60/286,550		Beyer et al.	-		6/29/01
	AD	Ser. No. 09/896,484		Bonde et al.			
	AE	Ser. No. 09/941,944		Socks et al.			8/28/01
	AF	3,449,938	6/17/69	Giddings			
	AG	4,912,057	3/27/90	Guirguis et al.	1 (	-	-
	AH	5,202,227	4/13/93	Matsuda et al.		1	A
	AI	5,514,555	5/7/96	Springer et al.	71		N. K.
	AJ	5,536,662	7/16/96	Humphries et al.			
	AK	5,593,814	1/14/97	Matsuda et al.			
	AL	5,716,852	2/10/98	Yager et al.			
	AM	5,728,576	3/17/98	Dudley et al.			
	AN	5,739,001	4/14/98	Brown et al.			
	AO	5,776,748	7/7/98	Singhvi et al.			
	AP	5,948,684	9/7/99	Weigl et al.			
	AQ	5,972,710	10/26/99	Weigl et al.			
	AR	- 07(02(	11/2/99	Singhvi et al.			
-	-		11/23/99	Dietz et al.			
	AS		7/18/00	Weigl et al.			40
	AT	170	8/15/00	Taylor			

	DATE CONSIDERED:
EXAMINER SIGNATURE:	MDED 609 Draw line through citation if not in

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

SUBSTITUTE FORM PTO-1449 (MODIFIED)	U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE	ATTY. DOCKET NO.: 2100-0006	SERIAL NO.: 09:945,360	
	N DISCLOSURE BY APPLICANT	APPLICANT: Anthony C. CHAO et al.		
(37 CFR +98(b))	neets if necessary)	FILING DATE: August 31, 2001	GROUP: 1743	

TRA			U.S. PAT	ENT I	DOCUMENTS				
EXAMINER CITE INITIALS NO.		PATENT NUMBER	ISSUE DATE	ISSUE PATENTEE		CLASS	SUBCLASS	FILING II Approi	F
	AV	6,120,666	9/12/00		Jacobson et al.				
	AW	6,159,739	12/12/00		Weigl et al.			<del> </del>	6/97
	AX	6,171,865	1/9/01		Wiegl et al.		1 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7		1/99
	AY	6,174,690	1/16/01		Manger et al.				7/99
	AZ	6,180,239	1/30/01		Whitesides et al.			-	3/96
	BA	6,200,814	3/13/01		Malmqvist et al.		M	1/20/98	
			FOREIGN	PATE	NT DOCUMENTS				LATION
EXAMINER INITIALS	CITE NO.	DOCUMENT NUMBER	PUBLICAT DATE		COUNTRY OR PATENT OFFICE	CLASS	SUBCLASS	TRANS	NO
	ВВ	WO 99/05512	2/4/99		PCT				
	BC	WO 00/56444	9/28/00		PCT				
		OTHER DOCU	IMENTS — N	ONPA	TENT LITERATUR	E DOCUM	ENTS		· CION
EXAMINER INITIALS	DATE, PAGE(S), VOLUME-ISSUE NUMBER(S), TOBERS								
	BD	Boyden (1962), "The Chemotactic Effect of Mixtures of Antibody and Antigen on Polymorphonuclear Leucocytes," J. Exp. Med. 115:453-466.							
	BE	Eddershaw et al. (2000), "ADME/PK as Part of a Rational Approach to Drug Discovery," <i>Drug Discov. Today</i> 5(9):409-414.							
	BF	Elkins et al. (2000), "Progress in Predicting Human ADME Parameters in Silico," <i>Journal of Pharmacological and Toxicological Methods</i> 44(1):251-272.							
	BG	Ramos et al., "Quantitative Measurement of Cell – Cell Adhesion Under Flow Conditions," <i>Methods in Molecul Medicine</i> 18:507-519							
	ВН	Takayama et al. (19 Capillary Networks	999), "Patternir	ng Cell	s and Their Environm	ents Using N	Multiple Laminar	Fluid Flov	vs in 

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SUBSTITUTE FORM PTO-1449	U.S. DEPARTMENT OF COMMERCE	ATTY. DOCKET NO.:	SERIAL NO.:	
(MODIFIED)	PATENT AND TRADEMARK OFFICE	2100-0006	09/945,360	
	ON DISCLOSURE  T BY APPLICANT	APPLICANT: Anthony C. CHAO et al.		
(Use several	Sheets if necessary)	FILING DATE:	GROUP:	
(37 CFR 1.98(b))		August 31, 2001	1743	

		OTHER DOCUMENTS — NONPATENT LITERATURE DOCUMENTS
EXAMINER INITIALS	CITE NO.	INCLUDE NAME OF AUTHOR, TITLE OF ARTICLE (IF APPROPRIATE), TITLE OF PUBLICATION, DATE, PAGE(S), VOLUME-ISSUE NUMBER(S), PUBLISHER, AND PLACE OF PUBLICATION
INITIALS	BI	Takayama et al. (2001), "Laminar Flows: Subcellular Positioning of Small Molecules," Nature 411:1016.
	ВЈ	Tashiro et al. (2000), "Design and Simulation of Particles and Biomolecules Handling Micro Flow Cells with Three-Dimensional Sheath Flow," <i>Micro Total Analysis Systems</i> 2000, pp. 209-212.
	BK	Thompson (2000), "Early ADME in Support of Drug Discovery: The Role of Metabolic Stability Studies," Curi Drug. Metab. 1(3):215-241 (abstract only).
	BL	Weigl et al. (1999), "Microfluidic Diffusion-Based Separation and Detection," Science 283(5400):346-347.

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